

Claims

- [c1] 1. A method for managing an access operation for a big size nonvolatile memory having a plurality of blocks that includes a data block for storing original data, and a writing block for data temporary storage used in the access operation, wherein each of the blocks has a plurality of pages and each of the pages has multiple sectors, the method comprising:
setting at least one of the blocks as a page cache block;
and
writing a last page of a data, which is desired to be written into the writing block, into one available page of the page cache block.
- [c2] 2. The method of claim 1, wherein if a size of the data needs not to cross a page then the data is directly written into the page cache block.
- [c3] 3. The method of claim 1, wherein if a size of the data needs to cross one page then the last page of the data is written into the page cache block.
- [c4] 4. The method of claim 1, wherein when the data is to be written to a specific sector which is belonging to a spe-

cific page but is not belonging to a first page, the previous pages before the specific pages are copied from the data block into the writing block, and the specific page containing the specific sector is written to the page cache block.

- [c5] 5. A block structure for a big-size nonvolatile memory that has a plurality of blocks including a data block, and a writing block, wherein each of the blocks has multiple pages, and each of the pages has multiple sectors, the block structure further comprising:
a page cache block, for storing a latest page with respect to the writing block when a data is to be written into the writing block for an access operation.
- [c6] 6. The block structure of claim 5, wherein the latest page is a last page of the data, which is desired to be written into the writing block.
- [c7] 7. The block structure of claim 5, wherein the data to be written to the writing block is grouped by a page unit, and a last page is stored in page cache block.
- [c8] 8. The block structure of claim 5, wherein the writing block is used for temporarily storing a data which is associating with the data block.
- [c9] 9. The block structure of claim 5, wherein the writing

block and the data block can be swapped when the writing block is fully written.

- [c10] 10. The block structure of claim 5, wherein if a size of the data is not greater than a size of one page, then the data is directly stored into the page cache block.
- [c11] 11. The block structure of claim 5, wherein if a size of the data is greater than one page, then the last page is stored into the page cache block.